Mad in America
SCIENCE, PSYCHIATRY AND SOCIAL JUSTICE

# Part 1: Neurodiversity–What Exactly Does It Mean?

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*Mad in America and Mad in the UK are jointly publishing a four-part series on neurodiversity over the next four weeks. The series was edited by Mad in the UK editors, and authored by John Cromby and Lucy Johnstone.*

## Introduction

*Over the last 25 years, neurodiversity has inspired both a social movement and an academic paradigm. At the time of writing both the movement and the paradigm are still developing, with people interpreting neurodiversity in different ways.*

*Some align neurodiversity with the critique of diagnosis and see it as offering a new, non-medical and non-pathologising way forward. Others strongly support diagnostic labels, and argue that professional diagnoses of autism, ADHD and so on should be more readily available.*

*So neurodiversity might be an inspiring new paradigm—a non-stigmatising alternative to psychiatric diagnosis, that encourages people to accept difference and value diversity. Alternatively, it might simply turn out to be the old ideas dressed up in new language about choice and empowerment—thus rehabilitating diagnostic thinking and assumptions and essentially preserving the status quo.*

*To add to the complexity, an emerging third group uses the neurodiversity movement as a platform for attacking current critiques and critics of the psychiatric diagnostic paradigm, such as those featured on MITUK and MIA, while at the same time claiming to be the true radicals. This is despite the fact that both parties share many views about the social and political roots of distress. It is a confusing and evolving picture. However, given the rapidity with which the concept of 'neurodiversity' has entered common parlance as well as clinical settings, we feel it is timely to attempt an overview of these influential but often contradictory perspectives.*

*Some caveats are necessary. It has rapidly, and surprisingly, become as difficult to challenge the idea of neurodiversity as it once was to dispute the labels of 'schizophrenia' or 'personality disorder.' In now doing so, we want to be very clear, firstly, that anything we say about neurodiversity is unlikely to apply to all uses and users of the term, given the multiple meanings and positions associated with it. Our blogs will attempt to clarify what we see as the major current trends and perspectives in the field, while recognising that in many ways they are very different in aims and motives.*

*Secondly, we wholeheartedly respect and uphold people's personal right to describe their difficulties and differences in any way that is helpful to them (although we argue that in their work clinicians have a duty to use concepts that are in conventional terms evidence-based). None of what follows is intended as an attempt to limit or change that right, or to impose alternatives.*

*We welcome responses and debate.*

*(Authors' note: We have indicated our reservations about the validity of diagnostic terms by using phrases such as 'diagnosed as….' )*

### Neurodiversity

The first appearance of 'neurodiversity' in a published work is often said to be Australian sociologist Judy Singer's thesis in 1997. At that time new online communities were forming, using the still-novel internet to communicate. Realising that these communities could campaign for social change, Singer says she proposed 'neurodiversity' as a catalyst:

> "I knew what I was doing… 'Neuro' was a reference to the rise of neuroscience. 'Diversity' is a political term; it originated with the black American civil rights movement. 'Biodiversity' is really a political term, too. As a word, 'neurodiversity' describes the whole of humanity. But the neurodiversity *movement* is a political movement for people who want their human rights…. I thought: 'We need an umbrella term for a movement.' And I also perceived that this was going to be the last great identity politics movement to come out of the 20th century."

Singer's campaigning had a specific focus. Some years earlier, psychiatrist Lorna Wing had hypothesised the existence of an autistic spectrum—much as in DSM5's Autistic Spectrum Disorder (ASD). At one end of the spectrum were those people with severe intellectual impairments said to be autistic; at the other end, 'high functioning' people described as having Asperger's Syndrome. This syndrome was merged into the broader category of ASD in DSM 5 (2013) and ICD 11 (2019), and is therefore no longer used as a formal diagnosis, although some people still find it helpful to identify as 'Aspies.'

Singer not only recognised aspects of 'high-functioning autism' in her mother's behaviour, but also 'after her daughter was diagnosed with Asperger's at the age of nine… began to recognise certain traits in herself'. Consequently, neurodiversity initially focused upon people described as having high functioning autism or, as it was then termed, Asperger's. Although Singer recognised that this excluded people with severe impairments, she hoped to foster a movement that would eventually benefit everyone who was said to have autism.

### The Neurodiversity Movement

Neurodiversity simply means 'variation in neurocognitive functioning'. So neurodiversity refers to a continuum that embraces, in Singer's own words, 'the whole of humanity'. Like biodiversity in nature, neurodiversity is seen as a beneficial and necessary aspect of the human species. But as neurodiversity theorist Nick Walker explains, this diversity is typically said to consist of two groups: people described as 'neurodivergent', who are in the minority, because they 'diverge from the dominant societal standards of "normal" neurocognitive functioning', and the dominant majority who are said to be 'neurotypical'. The neurodiversity *movement*, then, campaigns for the rights of neurodivergent people, including those described as having ADHD or ASD.

Singer's seminal contribution to neurodiversity was recognised in 2023 with an award from London's Birkbeck College, and an acknowledgement that she had 'changed how the world thinks'. She has recently been accused of transphobia, and possibly as a consequence of this, some of her prominent former supporters now argue that 'To continue to attribute the coining and theorising of neurodiversity uncritically to any individual would from this point on be to knowingly and egregiously erase neurodivergent people from their own history'. This has led to unseemly public allegations and counter-allegations about altering Wikipedia entries and so on. Thus, there are significant tensions even within the broad subgroups of the neurodiversity movement.

Both neurodiversity and neurodivergence are broad, flexible concepts with considerable variation in the range of conditions they are said to include. One organisation lists 'Autism Spectrum Disorder (ASD), Tourette's, Attention Deficit Hyperactivity Disorder (ADHD), Dyslexia and Parkinson's'. Alternately, an NHS Trust in England suggests 'Autism, ADHD, ADD, Dyslexia, Dyscalculia and Dyspraxia'. And in the USA, the Cleveland Clinic offers an even wider variety of diagnoses including Down's Syndrome, obsessive-compulsive disorder, bipolar disorder and social anxiety disorder. Stretching the concept still further, it has even been suggested that neurodiversity should also encompass those diagnosed with brain injury, epilepsy, 'schizophrenia', 'personality disorder' and dementia.

We return to the implications of this expansionism in Part 2. Throughout this series of blogs we will often use 'ADHD' and 'ASD' as examples of neurodivergence, since these are said to be its most common manifestations. So far we have defined neurodiversity, and described what is meant by the neurodiversity movement. We will now consider the neurodiversity *paradigm*.

### The Neurodiversity Paradigm

This term describes work by commentators, researchers and scholars who believe that cognitive diversity (as an effect of neurodiversity) is the norm for our species. They go on to argue that many conditions described as disorders are therefore more accurately seen as neurodivergent differences with potentially positive aspects. So advocates of this view identify, prioritise and promote the

experiences and needs of neurodivergent people, and conduct research where the social model of disability is a frequent resource.

The 'social model' actually refers to a collection of related models, a small set of similar ways of conceptualising disability (and related terms such as impairment and handicap). These models are collectively called 'social' because they all challenge the assumption that disability is simply medical. They vary slightly in how they frame this challenge, however. One widely used version of the social model proposes that impairment is an individual and (sometimes) medical matter. However, disability only arises when individual impairments encounter disabling environments built or designed according to neurotypical assumptions.

To illustrate: an *impairment* might prevent someone from walking because of damage to their nerves or muscles. However, that person is *disabled* only to the extent that transport, buildings and so on are inaccessible to people who use wheelchairs. So from a social model perspective, disability is not simply located in the individual. Instead, it emerges from failures to accommodate the needs of those who are not part of the able-bodied majority. This perspective has enabled disability activists who have different traits and conditions to forge links, strengthening their campaigns.

In line with this, neurodiversity treats forms of neurodivergence as enduring and pervasive differences in being human. Rather than being seen as medical or psychiatric disorders, which could in principle be treated or resolved, these collections of traits are understood as describing more-or-less stable characteristics of the self which happen not to fit in with neurotypical norms.

Neurodiversity theorist Nick Walker was the first to coin the phrase the 'pathology paradigm' to describe the set of ideas, beliefs and practices which impose and reproduce these norms. At core, says Walker, the pathology paradigm assumes:

> '…that there is one "right" style of human neurocognitive functioning. Variations in neurocognitive functioning that diverge substantially from socially constructed standards of 'normal'—including the variations that constitute autism—are framed within this paradigm as medical pathologies, as deficits, damage, or "disorders".'

In contrast, neurodiversity sees the experiences associated with psychiatric diagnoses as describing *differences, not disorders*. They represent equally valid ways of experiencing the world which do not fit a narrative of either 'cure' or 'tragedy'. Again, whilst the diagnoses most commonly referred to are ASD or ADHD, many other diagnoses are potentially relevant. Whatever diagnosis they are given, neurodivergent people are seen as possessing unique strengths not always recognised or valued by mainstream society.

Confusingly, though, many people who identify as neurodivergent *do* use psychiatric diagnostic labels to describe themselves. Many of them are not against psychiatric diagnosis as such; rather, they are opposed to a particular, medical understanding of diagnosis. In fact, faced with long waiting lists at Autism and ADHD clinics, a growing number are claiming the right to 'self-diagnose'. In addition, some describe themselves as 'disabled' in a sense that seems to go beyond the disability movement's meaning of the term. This leads to debates about the equivalence of different types of 'disability'—awkwardness in social situations, for example, versus using a wheelchair or recovering from a stroke.

We will discuss this in more detail in Part 4.

A point of agreement between all perspectives is that the differences associated with being neurodivergent share an important feature: *they contradict dominant social norms* about how we are expected to feel, think, behave, relate, work and live. The 6-year-old boy who daydreams in school; the student who prefers reading to parties; the office worker who is often distracted; the parent who is untidy and disorganised—all can now attribute these traits to their neurodivergence.

The concept of neurodiversity has been taken up by campaigners in many countries, and inspired activists online and in the real world. An overview of neurodiversity's impact in the USA observes that:

> 'Today, the term neurodiversity yields thousands of results on Google Scholar. A growing number of universities boast neurodiversity initiatives, typically focused on some combination of research into neurological disability and supporting greater access to higher education. Major international corporations….boast "neurodiversity hiring programs" that recruit autistic jobseekers as well as others with neurological disabilities. In December 2020, the US federal government welcomed the first participants in the Neurodiverse Federal Workforce pilot program (Thomas, 2021). Neurodiversity…. has firmly entered the cultural mainstream, with the concept referred to frequently by parents and professionals alongside the autistic persons who first initiated it. Furthermore, autistic people themselves have built infrastructure in the form of advocacy groups, cultural convenings, and even businesses oriented around the movement's ideas and larger philosophy.'

In the UK, neurodiversity is discussed in the 2021 National Strategy for autistic people, and is routinely included in official reports on mental health. 'Neurodivergent Labour' is '…a representative and campaigning organisation of Labour Party members and supporters who are neurologically divergent' while 'Conservative Friends of Neurodiversity' is the Tory equivalent. Neurodiversity was the subject of a 2023 special edition of The Psychologist, the house journal for all psychologists in the UK. Groups for 'neurodivergent' therapists, counsellors, clients and many others are joining the growing number of organisations, training courses, enterprises and businesses based on the concept. Clinicians of various backgrounds, journalists, teachers, parents and many others have adopted the language of neurodiversity. 'Neurodivergent TikTok' has thousands of followers, while in schools the term is increasingly used for children who struggle with reading, spelling or physical co-ordination, as well as with attention. And the UK's Royal College of Psychiatry (RCP) has enthusiastically welcomed the concept. In 2023 the RCP marked 'International Day of Persons with Disabilities' by publishing two blogs 'that reveal what working in psychiatry is like for a neurodivergent person'. Their website has for some time offered educational webinars about neurodiversity to psychiatrists, and NHS England has appointed a former RCP president as the first medical director for mental health and neurodiversity.

### Problems Defining Neurodiversity

Neurodiversity suddenly seems to have become a fact of life, without the critical scrutiny that any new concept or movement needs. This is especially important since neurodiversity appears to be equally acceptable to left-wing campaigners for social justice, *and* to right-wing politicians and parties, multi-national corporations and government officials. The ease with which neurodiversity is accepted across the entire political landscape clearly signals that there is nothing intrinsically radical or liberatory about

the concept. There are, however, various problems associated with attempts to define neurodiversity. We summarise these problems below.

### The Meaning of 'Neuro-'

We have shown that neurodivergence is an inclusive, flexible concept, said to include a wide variety of diagnoses and experiences. This leads to some obvious problems in deciding who is, or is not, neurodivergent. Diversity, as Singer said, is part of the human condition: in a broad sense we are all 'wired differently.' Crucially, though, *the subdivision into 'neurodivergent' and 'neurotypical' entirely lacks a neurological basis*.

This is why psychiatrist Sami Timimi says: 'I struggle with the "neuro" bit of 'neurodiversity'—the evidence just isn't there. We are all neurodiverse, so as a concept it's meaningless in a biological sense'. This is also true of the specific diagnoses most commonly seen as manifestations of neurodiversity, ADHD and ASD, which are described as 'neurodevelopmental disorders' even though in most cases there is little evidence to support this claim. We will return to this issue in Part 2; for now, we need to ask where the 'neuro bit' came from, and why is it there?

The 1990s "Decade of the Brain" was initiated by US President George Bush, and saw massive investment in neuroscience across the English-speaking world. Colourful images from brain scanners, images that seemed to be photographs of living thought itself, were seized upon and reproduced by the media. At the same time, studies linking specific brain areas to particular abilities or defects were splashed across the news almost daily. This was the rise of neuroscience, which Judy Singer said led her to promote the term neurodiversity.

Singer was not the only person to be influenced. As the effects of the flood of neuroscience research rippled through universities, a multitude of new disciplines was rapidly proposed: neuro-economics, neuro-anthropology, neuro-marketing, neuro-politics, neuro-law, neuro-education and more. Relatedly, in everyday life researchers have seen an 'explosion in usage and application of the "neuro" prefix to seemingly unlimited areas of discourse'. They hypothesise that this is due to the attraction of 'adding an authoritative gloss by virtue of its scientific, modern, technological associations').

In academia the great wave of neuro-enthusiasm came with warnings about both *neuromyths* and *neurobabble*. A neuromyth is a culturally prevalent misunderstanding of neuroscience, used to justify actions or policies. In education, for example, the neuromyth that there are individual brain-based preferences for different learning styles—visual, auditory or kinetic—influenced the way that some teachers taught. The widespread but erroneous belief that the diagnoses of ADHD and ASD are associated with known neurodevelopmental changes (see Part 2 of this series) could be seen as a contemporary example of a neuromyth.

Neuro-babble, say academics, is when a description or explanation gains authority simply because it is somehow connected to neuroscience. It might, for example, come from a neuroscientist, or include speculation about a particular brain region or system. In 2011, neuroscientist Susan Greenfield claimed that computer games cause dementia. Her claim was reported as though it was factual, even though there was no research testing this hypothesis.

Now, some twenty years since the Decade of the Brain, it is apparent that most of the proposed new neuro-disciplines either never took off or quickly fizzled out. And, alerted to the dangers of neuromyths, neuroscientists today have few excuses for overstating the significance of their research.

But in everyday life—where neuro-babble can simply mean adding the prefix 'neuro-'—the effects of the 1990s neuroscience boom continue seemingly unabated. In addition to neurodiversity itself, the movement has now given us such terms as neuroaffirmative, neuronorms, neurotribes, neurotypes, neurokin, neurocognitivism, neurospicy, neuroqueer, and even neuro-Thatcherism.

So Timimi is right to question the validity of the neuro- prefix. Its widespread use means we must be careful to distinguish between obvious truths and speculative neuro-babble. It is obviously true that we each have a uniquely-wired brain; and that some people have very real struggles with concentration, making relationships, and so on. These truths are quite distinct from statements implying that there are known, stable, observable differences that explain these difficulties in neurological terms, and which thus validate the concepts of neurodiversity, neurodevelopmental disorder, ASD or ADHD.

Continual caution of this kind is necessary because, like psychiatric diagnoses more generally, there are plenty of optimistic—albeit vague, abstract and unconfirmed—statements that seem to back-up these more specific claims. Here is an example:

> '…while there are no precise biomarkers, there is evidence of complex clusters of biological tendencies in structure and functioning at least roughly mapping on to a variety of currently pathologised forms of functioning.'

But, as also with psychiatric diagnoses more generally, such claims are disputed by experts in (for example) neuroscience, psychiatry, neuroimaging and genetics who have carefully studied the evidence from their own disciplines and drawn quite different conclusions

### Expansionism

Lack of clarity about basic concepts has had the predictable consequence of massive expansionism. Over time, the diagnostic criteria for both ADHD and ASD have widened, both officially and unofficially, and now include many who previously would not have been given a diagnosis. This was deliberate, and took place after lobbying by advocates in the USA, who see a lifelong diagnosis as the key to healthcare and disability legal protections. Many more who didn't have learning disabilities were diagnosed. Private clinics sprang up, offering diagnostic assessments and promising a fast track to the help you need, which they promise will be facilitated by a diagnosis.

Dr Allen Frances, chair of the DSM IV committee, has publicly expressed regret for the expansion of criteria in the 1994 manual, which '…inadvertently contributed to three false "epidemics"—attention deficit disorder, autism and childhood bipolar disorder.' Part 2 of this series will consider some possible wider reasons for the 'epidemics' in ADHD and ASD (the increase in childhood bipolar disorder is both less striking and more uncertain). Nevertheless, to some extent the increases are almost certainly the consequence of adding criteria for under-7s such as 'often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities'; and '…often runs about or climbs excessively in situations in which it is inappropriate'. It would be an unusual child who did not

sometimes behave in that way.

It is not surprising that the even fuzzier concept of neurodivergence has also expanded, so that it now includes *almost every human behaviour and experience, plus its opposite*. As a brief glance at the many communities on social media will show, signs of neurodivergence are said to include not concentrating, or being over-focused; talking too much, or too little; oversharing, or undersharing; difficulty in switching tasks, or inability to stick to one; making eye contact too often or too infrequently; being particularly sensitive or insensitive; drinking alcohol rarely, or too much; being seen as glamorous and composed, or odd and chaotic; losing jobs regularly, or keeping them for decades; being high or low achieving; having a strong interest in football and indie bands, or an aversion to popular culture; over-apologising, or being rude and not caring what people think; keeping the same hair colour and style for years, or changing it every month; and so on (see for example this thread on Twitter/X).

The ever-expanding range of neurodivergent experiences circulated on social media also includes: reading too much, collecting information about birds, cars, trains or planes, high pain tolerance, not responding promptly to texts, feeling exhausted after a long office day, speaking the truth, feeling tired all the time, wearing bright colours, disliking fluorescent lights, enjoying being alone, fidgeting, biting your fingernails, staying up too late, being concerned about social justice, disliking wearing socks, losing your car keys, being constantly late, impulsivity, scrolling through your phone when you should be doing something else, and waving your hands when talking; and may even explain, according to one anxious enquirer, 'difficulty getting hold of a plumber.'

There is also a whole new terminology to describe what were previously seen as unremarkable behaviours: fiddling with your hair is now 'stimming'; disliking loud music is a 'sensory sensitivity'; losing your temper may be a case of 'autistic meltdown'; upset at the end of a relationship is 'rejection sensitivity dysphoria'; difficulty keeping up with daily tasks is 'pathological demand avoidance'. To make things more complicated, neurodivergent people, particularly girls and women, are apparently able to 'mask' their differences for decades by becoming exceptionally skilled at displaying the opposite behaviours; this ability itself then becomes a sign of their 'autism'.

Another curiosity is that many of these examples would seem to extend well beyond the experiences that could be described as primarily as a 'neurocognitive' style, as in Nick Walker's seminal definition of neurodiversity. Rather, they seem to encompass more or less the whole spectrum of human emotions and behaviour. In this context, Walker has recently begun using the term 'bodymind' in recognition of the fact that 'mind is an embodied phenomenon, and that mind and embodiment are inseparably entwined'. However, despite this verbal camouflage, the core idea that neurodivergence is fundamentally to do with the brain remains central.

It may be objected that some of these examples of apparent neurodivergence are obviously ridiculous, and that official sites are more restrained. Yet this objection misses some very important points: The truth is that there are no 'official' sites that, either by authority or consensus, are agreed to define neurodivergence accurately. Nor are there any objective criteria to distinguish 'correct' from 'incorrect' instances of neurodivergence. Nor is there any formal consensus regarding how many traits or behaviours qualify you as neurodivergent. Neither is there any agreed guidance on how noticeable, extreme or troublesome these traits or behaviours should be in order to count. And receiving an official

diagnosis of one of the conditions included under the term 'neurodivergence' does not get us any further, since those diagnoses are themselves—like all psychiatric labels—based ultimately on subjective judgements about how far someone's behaviour deviates from a given social norm.

Further complicating matters, the neurodiversity movement now increasingly argues for the right of people to self-diagnose on the basis of whatever experiences they are having, and encourages them to see this as just as valid as an official diagnosis. We will return to the issue of self-diagnosis later in this series.

### Excluded Groups

The expansion of neurodivergence has, paradoxically, led to alienation and anger amongst parents and carers of those children identified as having autism according to earlier, much narrower DSM criteria. These children typically have severe deficits and impairments that do seem to fit the description of a neurodevelopmental disorder of some kind (although medical tests are currently lacking). When it was initially proposed as a distinct condition by Leo Kanner in 1943, in fact, autism was only said to occur amongst people with severe intellectual impairments). The merging of this group, in DSM 5, with 'Asperger's or 'high-functioning' presentations means that children who never learn to speak or live independently find themselves in the same diagnostic group as articulate adults with friends, partners and successful careers.

These differences are acknowledged by some neurodiversity scholars: 'What used to be called Asperger's Syndrome (hereafter, autism) [is] an example of neurodivergent functioning [with] no inherent… clinical suffering or disablement'. But as child psychiatrist Sami Timimi points out, a category that includes both 'residents of institutions with little functioning language…and a long list of the great and the good such as Mozart, Van Gogh, Edison, Darwin and Einstein—all of whom, along with many others, have been retrospectively diagnosed' has very little coherence.

The problem is further illustrated by the growing number of celebrities with outwardly successful lives who now describe themselves as 'autistic' or as having ADHD; in the UK this includes Chris Packham, Anthony Hopkins, Melanie Sykes, Gary Numan, Rory Bremner, Stephen Fry, Ant McPartlin, Sheridan Smith, Sue Perkins, Jamie Oliver, Johnny Vegas and Heston Blumenthal, and in the USA Dan Ackroyd, Jerry Seinfield, Elon Musk, Courtney Love, Darryl Hannah, James Taylor, John Denver, and a growing number of others.

Inclusion for some has thus resulted in exclusion for others—often those in most need. In the words of a father with two non-verbal sons who require 24-hour care: 'Neurodiversity advocates ignore the harsh realities of severe autism, and want to forget about my sons and others like them…. For them, autism is a life-altering, cruel disability, and I'd do anything to help them feel good and give them a better quality of life'.

In response to these kinds of concerns there is now a movement by some parents to define children with severe autism as a separate group with their own distinctly different needs. They feel that these needs are becoming increasingly invisible, and that their children are even losing services, as a consequence of the wider neurodiversity movement.

Meanwhile, somewhere between those with undeniable neurological impairments and those described as high-functioning, there are large numbers of seemingly ordinary children who do not seem to be learning or behaving as desired, and adults who are in various ways struggling with daily life. The contrast between the two ends of the ever-expanding spectrum could hardly be more pronounced. Are these really just the same kind of phenomenon or condition, and should the same kinds of disability status and adjustments apply?

### Clinical Research and Practice

With regard to clinical research, the absence of a clear definition of neurodivergence, either in general or in its ADHD or ASD versions, will inevitably hinder both reasoning and the identification of variables and measures. This will impact negatively upon both empirical research and theory building.

In addition, the view of neurodivergence as 'difference not disorder' can make the very idea of many kinds of research controversial, since the notion of 'treatment' or 'cure' is seen by some as having eugenicist overtones. There is widespread agreement that the original version of Applied Behavioural Analysis (ABA) in the 1960s, involving intensive and sometimes punitive training in social skills for severely autistic children, was ethically problematic. The debate now centres on whether any kind of CBT is acceptable, or simply a way of imposing 'normality' on natural differences. Less widely known is the blocking by some in the neurodiversity community of the Spectrum 10K study, a large-scale genetically informed investigation into autism which aimed to clarify whether there were subgroups within the broad spectrum, on the grounds that the study was unethical. This was despite reassurances that the project was '…opposed to eugenics or looking for a cure for preventing or eradicating autism itself'.

Setting aside these specific examples, the conflation of what appear to be very different types of problem has created a more general suspicion of scientific and medical research into autism. This will inevitably hinder attempts to fill the gaps in our knowledge about children with severe, lifelong disabilities.

With regard to clinical practice, the most obvious consequence of the loose definition of neurodivergence is the lengthy waiting lists of people wanting to be assessed for ASD and/or ADHD. Currently, it is not unusual to be told that you will need to wait 5 years for an assessment, and we are aware of NHS clinics with several thousand people waiting to be seen. Understandably, this causes great distress. In the UK, an NHS taskforce has been set up to investigate the rapid rise in ADHD diagnoses and address variations in assessment and intervention.

This highlights another area of confusion. Neurodivergence is said to be 'difference not disorder'; these differences are held to be immutable and lifelong; and the very idea of 'treating' or 'curing' them is offensive to some. Given this, the purpose of ASD and ADHD clinics is unclear. Perhaps some want only a formal diagnosis that will validate difficulties, facilitate access to educational support, enable access to benefits and so on. If so, a clinical (as opposed to exclusively diagnostic) service is barely necessary—yet all strands of the neurodiversity movement deplore the lack of access to clinical services.

Meanwhile, the disadvantages of a child acquiring a label such as ADHD are becoming obvious. Dr

Allen Frances and colleagues summarised them in a recent paper as: 'low teacher and parent expectations that become self-fulfilling prophecies; prejudice and stigmatisation of diagnosed children; children applying stereotypes to themselves, leading to self-stigma and low self-esteem; decline of self-efficacy; a less effective and potentially counter-effective focus on fixed traits instead of behaviours; a more passive role towards problems…. And the risk of overlooking contextual, social and societal explanations, due to the specious explanation offered by labelling' These consequences will be illustrated in Part 3.

### Social Norms

Part of the problem in deciding on criteria for neurodivergence is that it is defined in relation to social norms; 'diverg(ing) from the dominant societal standards of "normal" neurocognitive functioning'. This is one of the few things on which all parties agree. But it also rules out the possibility of developing stable and objective criteria for deciding who is neurodivergent and who is neurotypical. This is simply because distinctions made on the basis of social norms (1) will change over time, and from one situation to another, as the relevant norms change; and (2) cannot be expected to coincide consistently with categories at the biological level.

This is a complex but important point. As we have seen, the traits associated with being neurodivergent are said to be more or less stable aspects of the individual—they have always, let's say, found it hard to organise themselves, and as a consequence, always have an untidy desk. It is possible —although unlikely—that this might be the direct result of specific neurological differences in the brain. This would be most plausible if the person has a confirmed medical condition such as brain injury or dementia. It is much less likely if the behaviours are simply, as with most of us most of the time, the result of a complex mixture of contextual and personal factors. Maybe we don't have a suitable place to work, we have too many demands and deadlines, we are distracted by something in our personal life, or a hundred other possibilities.

Whatever the reason, the point is that this failure to organise and be tidy will qualify as neurodivergence only if it clashes with a social expectation of how we *should* behave. And it may well do so, but this expectation will inevitably fluctuate and change: both from one situation to another, and over time as social norms continue to evolve.

So we might always be untidy—but only in certain situations will we also be neurodivergent. In an environment where untidiness was accepted as a sign of creativity—an artist's studio, perhaps—our neurodivergence would disappear. Conversely, in a tightly regulated, safety- critical environment, such as an operating theatre, untidiness would be a definite problem for which neurodivergence might be proposed as the explanation.

This much is acknowledged by neurodiversity proponents; they believe that the idea of a 'normal' brain is a social construct (although as we have noted, this is somewhat at odds with the claim that there are identifiably different structures or functions in the brains of neurodivergent people). However, the logical consequences of this belief are rarely discussed.

To extend the argument: if we base judgements about neurodivergence on social norms, any of us is liable to change status from 'neurotypical' to 'neurodivergent', and vice versa, as those norms change.

And just to add to the complexity, each of us is likely to have a mixture of neurotypical and neurodivergent traits or characteristics. We may find it easy to concentrate on our work tasks, but dread the after-work party. Conversely, we may enjoy loud music but be unable to tolerate the textures of certain foods.

In practice, possession of a single 'neurodivergent' trait seems to be enough to qualify for self-diagnosis into the category. Given the long list of candidate symptoms, this could very well mean that almost everyone is eligible. Again, while our particular preferences, behaviours and sensitivities might remain constant, there are no formal, 'official', agreed or accepted standards—and, it seems, no viable way of establishing any such standards—about how many of these traits you have to possess, how broadly we understand the social context, which norms are relevant, and so on.

This means it is entirely possible that people might flip from 'neurotypical' to 'neurodivergent' simply by moving from one situation or group to another. In theory, this could happen several times a day. It is even more likely to happen, of course, if we relocate to another culture. In fact, any given person's neuro-status, if we can put it that way, is likely to be in constant flux. Meanwhile, the artificial division into two groups can '… foster(s) an "us versus them" mentality, wherein nonautistic people are regarded as an oppressive enemy'.

All of this poses a profound problem for the neurodiversity movement. The rhetoric positions the two groups of neurotypical and neurodiverse as stable and definable. However, avoiding 'ableism', and 'learning to be a true ally and using your privileged position' to 'stand with' neurodivergent people in a commitment to being 'neuroaffirmative' will be much more difficult if the tables might be turned at any moment, as an evolving situation or changing context renders the formerly neurodivergent person neurotypical, or vice versa. Defining group membership by constantly shifting standards is not a viable basis for day-to-day living, clinical practice, or social movements based upon group identification.

### Conclusion

We have argued that the emerging field of neurodiversity is filled with contradictions. Many of these arise from the ill-defined nature of the concept of neurodiversity itself. But, as we will suggest in subsequent blogs, these and other paradoxes may also arise from the competing interests operating under this large but leaky conceptual umbrella. Some of the contradictions we have noted in this blog are:

Neurodiversity is said to be an inclusive concept applying to all of us—but in practice, has led to what many see as an unhelpful division between neurodivergents and neurotypicals—with the latter often positioned as benefiting from today's version of original sin, 'privilege'. Moreover, it is those with the most severe disabilities, people who in many cases quite literally have no voice of their own, who are most likely to be excluded by these developments. Inclusivity has thus turned into increased marginalisation.

In addition, the proliferation of new groupings and identities can, as Sami Timimi comments, 'create(s) unnecessary divisions, eroding the multiplicity that makes up our mental lives, and may trap people back into pigeonholes rather than free them from stereotyping'. Nick Walker's examples of correct language use—'My neurodiverse family includes three neurotypicals, two Autistics, and one person

who's both ADHD and dyslexic'—certainly seem to bear this out.

Simultaneously, the confusion between neurodivergence as 'difference' versus ADHD or ASD as 'disorder' (indeed, the word 'disorder' is part of the diagnostic label) leads to even more questions. What is research meant to be investigating, what are services meant to be offering, and should we be researching causes or offering treatments at all? And if we do provide services, which conditions would the 'Neurodiversity Service' include—and which would it exclude?

Here is another strange paradox. The more experiences that are subsumed under the heading of neurodivergence, the smaller the pool of neurotypicals becomes—until everyone is neurodivergent, and we are back to square one. The same holds true for psychiatric diagnosis in general: When everyone is 'mentally ill', then no one is 'mentally ill', because a diagnosis of 'mental illness' is based on a judgement that you are different from the norm, and it will soon be statistically normal to fit the criteria for at least one 'mental illness'.

It is also worth questioning the implicit picture of the neurotypical person, who apparently floats through life effortlessly, competently and serenely, never losing their keys or getting distracted by their phone, and always knowing exactly what to say and do in any given social situation. Who is this extraordinary creature? And how have we become persuaded to aspire to these completely unrealistic standards, just as the world gets more demanding and difficult? It is not the first time we have been fooled by such images—the perfect wife or mother, the tough guy, and so on—but this seems to be a particularly pernicious version. We suggest some reasons in later blogs.

Perhaps we need a better, less contradictory way of acknowledging and accepting our human struggles and skills, similarities and differences. And perhaps we need to think more deeply about why it is so hard to do this. Meanwhile, it seems that much of this confusion could be avoided if we dropped the 'neuro' prefix. We are all diverse. We want to live in a society that accepts all of us. Let us celebrate diversity, while being appropriately cautious about neurodiversity as a way of achieving this.

We will expand on these themes in the other three parts of this series.

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